

REMARKS:

Claims 1-12 and 14-24 are pending. Claims 1, 9, 12, 17-19 and 24 are amended. Applicants respectfully request entry of the above amendments and consideration of the following remarks.

35 U.S.C. §112 Rejections

Claim 24 stands rejected under 35 U.S.C. §112, second paragraph. Claim 24 has been amended to place it in proper independent form.

Applicants therefore respectfully request withdrawal of the claim rejection under 35 U.S.C. §112, second paragraph.

35 U.S.C. §103 Rejections

Claims 1, 4-8, 10, 11, 14 and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Raymond (U.S. Patent No. 5,747,083) in view of McIntyre (U.S. Patent No. 5,860,541).

Raymond teaches a feeding bottle having a teat 12 that includes an outer casing 13 and an inner core 14. The casing 13 includes a nipple 15 having perforations 18 on one end, a sealing flange 17 on another end, and an inner annular rib 19 between the nipple 15 and flange 17 that defines a passage E. (Fig. 10, col. 5, lines 14-20, 28-32.) The core 14 is substantially conical in form with a slightly concave outer surface. One end of the core 14 includes a flange 20 that cooperates with the annular rib 19 to define a check valve 19-20, while the opposite end of the core 14 includes a sealing flange 24. Adjacent the sealing flange 24, the core 14 also defines two recesses 21 and holes 22. A flexible pleated skirt 23 affords axial movement of the core 14 and, consequently, of the flange 20 to allow for opening and closing of the valve 19-20. The skirt 23 also biases the valve 19-20 into a closed position. (col. 5, lines 54-61.) The core 14 is completely solid with the exception of the recesses 21 and the holes 22. (Fig. 10, col. 5, lines 46-50.) Also, a distance or length "a" of the core 14 is smaller than a distance or length "b" of the casing 13 such that, when assembled, the valve 20 is preloaded against the inner annular rib 19, such that the valve 19-20 is biased into a closed position. (Fig. 10, col. 5, lines 62-67.) When

assembled, the core 14 and outer casing 13 cooperate to define a chamber F, which is in open fluid communication with the recesses 21 by way of the holes 22.

Raymond also teaches a second check valve 5 positioned “upstream” of the core 14. The check valve 5 is defined by a lower circular member 6 and an upper circular membrane 7. The check valve 5 is configured to afford one-way flow of fluid from the bag 3 into the space defined by the recesses 21 of the core 14. (Fig. 9, col. 4, line 62 to col. 5, line 13.)

The Examiner asserts that it would have been obvious to have provided integral flaps on the nipple of Raymond to eliminate the check valve and the necessity of assembly of such a valve in view of such teaching by McIntyre. McIntyre teaches a teat for the feeding of young animals in which flaps 26 are molded with the body of a teat 10 and cover a plurality of openings 28 formed in an otherwise closed end 27 of bung 16 to define a one-way valve. (Fig. 3, col. 3, lines 6-14.)

Applicants presume that the Examiner is suggesting that in view of Raymond and McIntyre, it would have been obvious to provide the device of Raymond with inwardly extending flaps on the inner surface of the outer casing 13 to cover the holes 22 of the core 14, thereby defining a one-way valve affording flow from the recesses 21 into the chamber F, but preventing flow from the chamber F to the recesses 21. This proposed combination is improper for at least the reasons discussed below.

To properly support a rejection under 35 U.S.C. §103, the Examiner must establish a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

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Without conceding that the final requirement is met, Applicants respectfully submit that there is no motivation to combine the references as proposed by the Examiner, and that there is no reasonable expectation that such a combination would be successful. As discussed below, the proposed combination would in fact render the device of Raymond completely inoperable,

particularly with respect to the “Pressuring” operating phase discussed by Raymond at col. 8, lines 6-21.

Raymond states:

The crushing of the casing 13 of the teat 12 by the jaws of the newborn generates an overpressure in the interior of same, i.e. in the chamber F. This overpressure has the effect, on one hand, of maintaining the check valve 6-7 in a closed position and, on the other hand, of assuring the opening of the check valve 19-20.

Raymond discusses the importance of this “Pressuring” operating phase in infant feeding at, among other places, col. 1, lines 46-58.

When the components of Raymond are assembled, there are substantially four independent chambers. A first chamber is defined by the bag 3, a second chamber is defined by the recesses 21, a third chamber F is defined between the core 14 and the outer casing 13, and a fourth chamber is defined by the nipple 15. In the configuration taught by Raymond, because the chamber F and recesses 21 are in open fluid communication by way of the holes 22, the pressure increase in chamber F due to crushing by the infant’s jaws is communicated to the recesses 21. Given the laws of fluid mechanics, it is apparent that, although Raymond only refers to an increase in pressure in the chamber F, it is in fact the pressure increase in the recesses 21 that urges the core 14 axially such that the valve 19-20 opens to allow fluid to flow from the chamber F into the nipple 15. More specifically, when the pressure increase due to crushing is communicated to the recesses 21, the preload forces that bias the valve 19-20 into the closed position¹ are overcome by the axially-directed component of the pressure forces applied to the recesses 21.

The combination suggested by the Examiner, in which a flap is provided to overlie the holes 22, would render the Raymond device inoperable because the pressure increase due to crushing in chamber F would not be communicated to the recesses 21. As a result, the preload forces biasing the valve 19-20 into the closed position could not be overcome, and no liquid would be permitted to flow from the chamber F to the nipple 15. Such a configuration, upon crushing of the casing 13, would actually operate in reverse, and would further bias the valve 19-20 into the closed position. Specifically, the pressure increase in chamber F would exert axially-

¹ Specifically, the force provided by the elasticity of the skirt 23, and the force provided by the fact that the distance “a” of the core 14 is less than the distance “b” of the outer casing 13. (See, Fig. 10 and col. 5, lines 59-67.)

directed pressure forces against the entire conical and concave outer surface of the core 14. The sum of these forces would be significantly greater than the pressure forces exerted on the extremely small annular surface of the valve 20 that remains exposed to the pressure in chamber F by way of the passage E. The valve 19-20 would therefore be further biased into the closed position, thereby preventing the flow of liquid from the chamber F to the nipple 15. If a proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).

Furthermore, with respect to the "Suction" operation phase discussed at col. 7 line 65 to col. 8 line 42, the core 14 is required to move axially upwardly (as viewed in the Figures) in order to open the valve 19-20 and to allow the flow of milk into the nipple 15. If a flap were provided to overlie the hole 22 as suggested by the Examiner, the flap would also be required to move generally upwardly in order for the flap to allow milk to flow from the recesses 21 into the chamber F. Because the core 14 and the flap would be moving in substantially the same direction, the ability of the flap to allow a sufficient amount of milk to flow from the recess 21 into the chamber F would be significantly impaired, if not prevented altogether. In view of the reduction or elimination of flow that would result from the combination suggested by the Examiner, there can be no reasonable expectation that such a combination would prove successful.

For these and other reasons, the Examiner has failed to establish a *prima facie* case of obviousness, and the rejection under 35 U.S.C. §103(a) relying on Raymond and McIntyre is improper. Applicants therefore respectfully request that the rejection of claims 1, 4-8, 10, 11, 14 and 17 be withdrawn.

Claim 16 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Raymond in view of McIntyre, and further in view of Rees (International Publication No. WO 00/48491).

Claim 16 depends from claim 1, which was improperly rejected for at least the reasons discussed above. Because claim 1 is therefore allowable, claim 16 is also allowable for the same and other reasons as claim 1.

Claim 18 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Raymond in view of McIntyre, and further in view of Demarco (U.S. Patent No. 2,600,978).

As discussed above, the combination of Raymond and McIntyre is improper because the proposed modification would render the Raymond device unsatisfactory for its intended purpose. There is nothing in the teachings of Demarco that resolves the impropriety of the Raymond and McIntyre combination. In fact, Demarco specifically teaches away from an infant feeding device, such as that taught by Raymond, where the infants jaws crush the casing 13 of the teat 12 to create an overpressure. Demarco states:

The size [of the device] is relatively critical, as its use is in a limited field, that for prematurely born babies. Further it is an activated device **requiring effort of appreciable extent by the attendant** to work it while feeding the baby. The conventional type of bottle and nipple are not held necessarily by the attendant when used by the normal baby. Because in this case **the baby does not work the forcing of the contents of the bottle into his mouth**. Such work in this invention is performed by the attendant squeezing on the body of the nipple.

Col. 3, lines 3-14 (emphasis added).

Thus, the teachings of Demarco, which require “effort of appreciable extent by the attendant” fail to resolve, and indeed exacerbate, the problems created by the proposed modification of Raymond in view of McIntyre, discussed above.

For these and other reasons, the Examiner has failed to establish a *prima facie* case of obviousness and the rejection under 35 U.S.C. §103(a) relying on Raymond, McIntyre, and Demarco is improper. Applicants therefore respectfully request that the rejection of claim 18 be withdrawn.

Claim 19 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Raymond in view of McIntyre and Rees, and further in view of Haberman ‘301 (UK Patent Application GB 2131301 A).

Claim 19 depends from claim 18, which was improperly rejected for at least the reasons discussed above. Because claim 18 is therefore allowable, claim 19 is also allowable for the same and other reasons as claim 18.

Allowable Subject Matter

Applicants gratefully acknowledge the Examiner's indication that claims 2, 3, 9, 12, 15 and 20-23 contain allowable subject matter. While these claims stand objected to as being dependent on a rejected base claim, in view of the remarks above, Applicants respectfully submit that the base claims – claim 1 and claim 18 – are allowable, and therefore request that the objection be withdrawn.

CONCLUSION:

In view of the foregoing, allowance of claims 1-12 and 14-24 is respectfully requested. The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Martin L. Stern", written over a horizontal line.

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